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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,553	03/08/2002	Atsushi Sugisaki	8028-1002	1462
466	7590	02/06/2006	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			LY, ANH VU H	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/092,553	Applicant(s) SUGISAKI, ATSUSHI	
	Examiner Anh-Vu H. Ly	Art Unit 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 1-4,6 and 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/8/02; 10/15/02; 8/4/03</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1-4, 6, and 8 are objected to because of the following informalities:

With respect to claim 1, in line 7, replace "transmitting the control data" with - - transmitting a control data- - or - -transmitting control data- -.

With respect to claim 2, in line 7, replace "transmitting the control data" with - - transmitting a control data- - or - -transmitting control data- - and in line 11, replace "control period to the selected" with - -control period in response to the selected- -.

With respect to claim 3, in line 7, replace "transmitting the control data" with - - transmitting a control data- - or - -transmitting control data- - and in line 13, replace "control period to the selected" with - -control period in response to the selected- -.

With respect to claims 4, 6, and 8, in lines 2-3, replace "the line state-measuring method" with - - a line state-measuring method- -.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Kong et al (US Pub 2003/0128674 A1). Hereinafter, referred to as Kong.

With respect to claim 1, Kong discloses a system for an adaptive resending request control in a mobile radio communications having a reception side (Figs. 2 and 4) and a transmission side (Fig. 3), in which said reception side comprises measuring means for measuring a line state of a line of a radio section (page 3, 36th paragraph and Fig. 2 - the receiver part 211 processes a signal received from a sending station. The receiver extracts a power control bit from the received signal to detect a receive signal strength indicator, RSSI, and outputs PCB, RSSI, and INFO data to a decision block 213. Herein, a measurement is performed to detect the received signal strength, RSSI, page 4, 57th paragraph), first selecting means for selecting a control state of a coding rate in correspondence with the measurement results on the basis of the measurement results (Fig. 2, decision block 213 generates Csel signal according to the measured RSSI and other factors), and means for renewing the control state (Fig. 2, Csel is an updated signal) and transmitting a control data on the control state to said transmission side

(Fig. 2, transmitter 215 transmits messages MSG, including Csel, for controlling the coding rate of the transmission side, as illustrated in Fig. 3); and said transmission side comprises second selecting means for selecting the coding rate in correspondence with the received control data on the basis of the received control data (page 3, 46th paragraph and Fig. 3 – selector 301 receives input data to be transmitted and selectively outputs the input data to the first encoder 311 or the second encoder 312 according to the select signal Csel output from the decision block 213), and means for generating data with the selected coding rate and transmitting the generated data to said reception side (Fig. 3 illustrates a structure of a forward link traffic channel transmission device for generating and transmitting data with the selected coding rate).

4. Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Khan et al (US Pub 2001/0056560 A1). Hereinafter, referred to as Khan.

With respect to claim 2, Khan discloses a system for an adaptive resending request control in mobile radio communications (Fig. 3b) having a reception side (Fig. 3b, remote unit 210) and a transmission side (Fig. 3b, BTS 180), in which said reception side comprises measuring means for measuring a line state of a line of a radio section (page 3, 37th paragraph – the receiver evaluates the erroneously received RLC block to obtain some estimate regarding how poorly it was received, i.e., its quality. This estimate could be a measure of bit error rate, BER, or carrier to interference ratio, C/I), first selecting means for selecting a control state of a packet resending control period in correspondence with the measurement results on the basis of the measurement results (page 3, 37th paragraph – receiver determines the amount of redundancy to request from the transmitter based on the quality estimate for a particular, erroneously

Art Unit: 2667

received RLC block. Herein, a controls state of a packet resending control period is the amount of redundancy), and means for renewing the control state and transmitting control data on the control state to said transmission side (page 4, 40th paragraph – the receiver has evaluated the quality of received RLC block and selected a desired amount of redundancy, it will include this information in a report to the transmitter. Herein, the desired amount of redundancy is an updated amount of redundancy or renewed amount of redundancy); and said transmission side comprises second selecting means for selecting the packet resending control period in correspondence with the received control data on the basis of the received control data, and control means for controlling a packet resending control period in response to the selected packet resending control period (page 4, 38th paragraph and Fig. 4, at block 420, the transmitter selects, controls, and transmits the requested amount of redundancy or requested redundant bits to the receiver for correcting errors).

With respect to claim 6, Khan discloses that wherein measuring means measures the number of packet reception (Fig. 4, at blocks 400, 410, 425, 430, and 440, a block of data is received, evaluated, or measured for errors. This identifies a number of good packets received and bad packets received in the total number of packet reception) and measures a line state by a line state measuring method which is used suitable for the number of packet reception (page 3, 37th paragraph – the estimate could be a measure of bit error rate, BER, or carrier to interference ratio, C/I).

With respect to claim 7, Khan discloses that wherein the line state measuring method is an SIR measuring method (page3, 37th paragraph – the estimate could be a measure of bit error rate, BER, or carrier to interference ratio, C/I) or a packet arrival rate measuring method.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kong et al (US Pub 2003/0128674 A1) in view of Sourour et al (US Patent No. 6,768,727 B1). Hereinafter, referred to as Kong and Sourour.

With respect to claims 4 and 5, Kong discloses that wherein the measuring means measure a line state by the line state-measuring method which is used suitable for the number of packet reception (Fig. 2, receiver part 211 employing method for measuring received signal strength). Kong does not disclose that wherein the measuring means measures the number of packet reception and wherein line state measuring method is an SIR measuring method. Sourour discloses that the mobile station monitors and measures the quality of the received signal for controlling forward link power. Wherein, a variety of channel quality estimates may be employed, e.g., RSSI, FER, BER, SIR, or combination thereof (col. 8, lines 3-24). Herein, FER is the ratio of total frame errors to frames transmitted and is directly related to the number of

Art Unit: 2667

packet reception. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include SIR and FER as channel quality estimates in Kong's system, as suggested by Sourour, since SIR and FER are well known channel quality estimates for estimating channel conditions between communications devices.

6. Claims 3 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khan et al (US Pub 2001/0056560 A1) in view of Kong et al (US Pub 2003/0128674 A1).

With respect to claim 3, Khan discloses a system for an adaptive resending request control in mobile radio communications (Fig. 3b) having a reception side (Fig. 3b, remote unit 210) and a transmission side (Fig. 3b, BTS 180), in which said reception side comprises measuring means for measuring a line state of a line of a radio section (page 3, 37th paragraph – the receiver evaluates the erroneously received RLC block to obtain some estimate regarding how poorly it was received, i.e., its quality. This estimate could be a measure of bit error rate, BER, or carrier to interference ratio, C/I), first selecting means for selecting a control state of a packet resending control period in correspondence with the measurement results on the basis of the measurement results (page 3, 37th paragraph – receiver determines the amount of redundancy to request from the transmitter based on the quality estimate for a particular, erroneously received RLC block), and means for renewing the control state and transmitting control data on the control state to said transmission side (page 4, 40th paragraph – the receiver has evaluated the quality of received RLC block and selected a desired amount of redundancy, it will include this information in a report to the transmitter. Herein, the desired amount of redundancy is an updated amount of redundancy or renewed amount of redundancy); and said transmission side

Art Unit: 2667

comprises second selecting means for selecting the packet resending control period in correspondence with the received control data on the basis of the received control data, and control means for controlling a packet resending control period in response to the selected packet resending control period (page 4, 38th paragraph and Fig. 4, at block 420, the transmitter selects, controls, and transmits the requested amount of redundancy or requested redundant bits to the receiver for correcting errors).

Khan does not disclose that the first selecting means selecting a control state of a coding rate; second selecting means selecting the coding rate; means for generating data with the selected coding rate and transmitting the generated data to the reception side.

Kong discloses that decision block 213 generates Csel signal according to the measured RSSI and other factors (Fig. 2); selector 301 receives input data to be transmitted and selectively outputs the input data to the first encoder 311 or the second encoder 312 according to the select signal Csel output from the decision block 213 (page 3, 46th paragraph and Fig. 3); and as illustrated Fig. 3, a structure of a forward link traffic channel transmission device for generating and transmitting data with the selected coding rate.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the features of selecting the coding rate based on the measured parameters and controlling the data transmissions according to the selected coding rate in Khan's system, as suggested by Kong, to improve a receiver's performance and save transmission power of the transmitter.

Art Unit: 2667

With respect to claim 8, Khan discloses that wherein measuring means measures the number of packet reception (Fig. 4, at blocks 400, 410, 425, 430, and 440, a block of data is received, evaluated, or measured for errors. This identifies a number of good packets received and bad packets received in the total number of packet reception) and measures a line state by a line state measuring method which is used suitable for the number of packet reception (page3, 37th paragraph – the estimate could be a measure of bit error rate, BER, or carrier to interference ratio, C/I).

With respect to claim 9, Khan discloses that wherein the line state measuring method is an SIR measuring method (page3, 37th paragraph – the estimate could be a measure of bit error rate, BER, or carrier to interference ratio, C/I) or a packet arrival rate measuring method.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nobelen (US Pub 2003/0131302 A1) discloses incremental redundancy radio link protocol.

Zhang (US Pub 2001/0037485 A1) discloses method and apparatus for adaptively coding a data signal.

Olofsson et al (US Patent No. 6,167,031) discloses method for selecting a combination of modulation and channel coding schemes in a digital communication system.

Art Unit: 2667

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Avl', is written over the signature line.

avl